REMARKS

OBJECTIONS TO SPECIFICATION

The specification was objected-to for having an embedded hyperlink or other browser executable code. The specification (as amended) is free from such objectionable material.

ALLOWABLE SUBJECT MATTER

Claims 5-9, 13-17, 24-25, and 33-34 were objected to as being dependent upon rejected base claims. These claims were said to be allowable, however, if rewritten in independent form including the limitations of the base claim and any intervening claims. These dependent claims have not been rewritten as independent claims; such rewriting is unnecessary because their base claims (as is) are already patentable, for reasons explained below.

35 USC 103 REJECTIONS

Claims 1-2, 10-11, 18-22, 26-32, and 35-38 were rejected under 35 USC 103 as being unpatentable over the combination of U.S. Patent No. 5,970,490 to Morgenstern in view of U.S. Patent No. 6,199,195 to Goodwin et al. ("Goodwin"). This rejection is hereby traversed. It is submitted that the claims are patentable since a *prima facie* case of obviousness has not been established / does not exist, as discussed in greater detail below.[1]

[1] MPEP 2142.

Teaching/Suggestion of Claim Limitations

First, the *prima facie* obviousness case is incomplete because, even if the references were to be combined as suggested (albeit improperly, as discussed below), the combination still does not teach or suggest all the claim limitations.[2] To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.[3] All words in a claim must be considered in judging the patentability of that claim against the prior art.[4]

Taking claim 1 as an example, the proposed combination of references fails to teach the following combination:

> "A method for constructing a query system for use with a body of data, comprising operations of:
>
> providing a data schema describing entries in a body of data such that the entries provide instances of the data schema;
>
> providing multiple appearance templates each providing instructions for computer presentation of on-screen constructs to receive user input of query parameters;
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> providing multiple subquery generators each comprising machine-executable code to prepare machine-executable query instructions applying a predetermined logical operation to the body of data;
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> providing multiple control schemas each control schema prescribing constituent components of query form controls providing instances

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2 MPEP 2142, 2143.03.

3 *Ex Parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). MPEP 706.02(j).

4 *In re Wilson*, 424 F.2d 1382, 165 USPQ 494, 496 (CCPA 1970). MPEP 2143.03.

of that control schema, the prescribed components of each control schema comprising:

specification of at least one appearance template and at least one subquery generator;

mapping between the specified appearance template and the data schema and between the specified subquery generator and the data schema;

providing one or more query form schemas prescribing constituent components of corresponding query form annotations that provide instances of the query form schemas, said components comprising:

identification of one or more of instances of the control schemas;

identification of elements of the data schema to be presented in query results.

In general, Morgenstern does not expressly disclose the construction of a query system. Rather, Morgenstern purportedly focuses on processing heterogeneous data, such as data with different schemata, different data models, different physical storage/access, and different semantics and meaning of data, etc. [Morgenstern: col. 3, lines 58-64] Morgenstern is said to provide a uniform language for representing diverse databases and specialized file formats, such as produced by CAD tools. Information mediators and information bridges access heterogeneous data resources and transform that information for use by databases and specialized representations. [Morgenstern: col. 3, lines 15-30] A key to Morgenstern's operation is the use of high level descriptions and specifications, for both the given application's representation of its data, as well as for specification of the executable transformations. [Morgenstern: col. 4, lines 55-67] Although it is unclear, since Morgenstern does not detail any query related aspects, perhaps Morgenstern relies on other (non-disclosed) systems/teachings to provide any query functionality.

Thus, is it not surprising that Morgenstern lacks numerous features of the present invention's claims. Considering claim 1 in greater detail, this claim is patentably distinguishable from Morgenstern/Goodwin because the cited art fails to show the claimed combination including "providing multiple appearance templates each providing instructions for computer presentation of on-screen constructs to receive user input of query parameters." The office action cites Morgenstern's col. 33 (lines 1-18), but this passage merely describes a structure editor for a high level data structure specification (HLDSS). There is no mention of user input of query parameters, let alone on-screen constructions to receive them, or instructions for the presentation of same.

Claim 1 is further patentable over Morgenstern/Goodwin because the references do not teach "providing multiple subquery generators each comprising machine-executable code to prepare machine-executable query instructions applying a predetermined logical operation to the body of data." These features are admittedly absent from Morgenstern. [Office Action: page 3, last 2 lines – page 4, line 1] As for Goodwin, this reference purportedly concerns automatically generated objected-oriented source code, and more particularly, source code objects within extensible object frameworks and links to enterprise resources. [Goodwin: col. 1, lines 7-12] Still, Goodwin does not mention machine-executable code to prepare machine-executable query instructions applying a predetermined logical operation to a body of data, as claimed. The office action merely cites Goodwin's Fig. 4 (where inputs to a code generator include "java" files generated by a language recognizing parser from various grammar files; col. 14, lines 15-200) and Goodwin's Fig. 7 (where a query manager is created, which receives and executes a query from a user process; col. 18, lines 1-10). Still, Goodwin does not even mention the preparation of machine-executable query

instructions, other than the coincidental use of the term "query" in brief reference to a query manager, whose construction and operation is not disclosed.

Claim 1 is still further patentable over Morgenstern/Goodwin because the references do not teach "providing multiple control schemas each control schema prescribing constituent components of query form controls providing instances of that control schema, the prescribed components of each control schema comprising: specification of at least one appearance template and at least one subquery generator; mapping between the specified appearance template and the data schema and between the specified subquery generator and the data schema." The office action cites Morgenstern's reference numerals 32, 52, 54, and 34 from Figure 2, endeavoring to provide the claimed features. However, a careful review of Morgenstern's text reveals that elements 32/52/54/34 merely concern schema analyzers that parse high level data structure specifications and create logical structure diagrams, which are internal context-independent representations of the data resource schemata and structures. [Morgenstern: col. 8, lines 9-21] There is no disclosure in Morgenstern that items 32/52/54/34 somehow provide control schemas as described, e.g., specification of appearance template and subquery generator, mapping between appearance template and data schema, mapping between subquery generator and data schema, etc. Although Morgenstern coincidentally utilizes the term "mapping" to refer to the mapping of SEMDAL (semantic data specification language) into SGML, the similarities end there; the claimed mapping is still missing from Morgenstern's disclosure. [Morgenstern: col. 14, lines 12-13] Moreover, Morgenstern cannot possibly teach the claimed control schema because Morgenstern does not disclose any subquery generators, per admission of the office action. Lacking subquery generators, how could

Morgenstern possibly show a control schema with specification of "at least one subquery generator" or mapping "between the specified subquery generator and the data schema"? Morgenstern simply cannot.

The applied art further fails to show "providing one or more query form schemas prescribing constituent components of corresponding query form annotations that provide instances of the query form schemas, said components comprising:
identification of one or more of instances of the control schemas;
identification of elements of the data schema to be presented in query results." The office action cites Morgenstern's col. 31/line 42 – col. 32/line 42 (where a browser is said to provide a homogenous representation of schema and data instances from multiple heterogeneous database and structure design files) and col. 22/line 41 – col. 23/line 8 (describing an blocking/unblocking scheme on the output tree). The office action observes that Morgenstern purportedly shows a schema 300 (Fig. 3). Still, these teachings are clearly unrelated to the claimed features. Simply absent from Morgenstern are query form schemas with their specific structure as claimed structure.

In view of the foregoing, the features of claim 1 are absent from the cited Morgenstern/Goodwin combination. Further, for similar reasons, independent -claims 10, 11, 18-22, 26-30, 31, 35, and 37-38 are not taught by the applied art.

Further in regard to claim 26, the Office Action alleges that Morgenstern/Goodwin show a compiler to create web browser compatible representation of the query form annotation. First, the claimed query form annotation is still missing from the applied art, as discussed above. Second, Morgenstern's compiler merely serves to provide compiled code that, when executed, creates the actual data structures for the schema and instance trees when an information bridge is executed in a second phase.

[Morgenstern: col. 25, lines 50-55] Morgenstern does not teach a compiler (as required by claim 26, for example) to create web-browser-compatible representations of query form annotations. Also in the context of claim 26, and in contradiction to the office action, Morgenstern/Goodwin fails to show "a run-time engine comprising an assembler to construct queries against the data schema according to query parameters submitted by user completion of the web-browser-compatible representations and a rendering engine to provide web-browser-compatible outputs of query results." The office action notes that Goodwin purportedly shows a data server for *performing* run-time object queries that are transformed to access information from enterprise resources with results instantiated between business objects that are generated within the composed object service framework. [Goodwin: col. 6, line 64 – col. 7, line 6] However, the office action still fails to show that Goodwin teach the required "assembler" to construct queries, nor the required "rendering engine" to provide web-browser compatible outputs of query results. Therefore, claim 26 is patentable over the applied art despite the specific treatment of this claim in the office action.

Furthermore, without even considering any individual merits of claims 2-9, 12, 23, 27, 32, and 36, these claims are distinguished from the applied art because they depend from independent claims that are distinguished as discussed above.[5] Numerous dependent claims, however, are further defined over the applied art. In the example of claim 2, for example, the office action fails to cite any specific teachings (for example, by column/line/figure number) that the references allegedly teach control schemas separate from the query form schemas. Thus, the office action fails to make out a *prima facie* case of obviousness as to this claim.

[5] If an independent claim is nonobvious under 35 USC 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) MPEP 2143.03.

Suggestion or Motivation

Second, there has been no suggestion or motivation, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.[6]

The office action says that it would have been obvious to a person of ordinary skill in the art to combine Morgenstern and Goodwin "to enable the user to generate query statements and create the desired controls." [Office Action: page 4] Morgenstern mentions the processing of SQL (structured query language) queries (col. 1, line 45) along with substantial discussion of the database field. It is difficult to comprehend why the evidently complex and sophisticated approach Morgenstern would lack a means to perform queries, thereby requiring Goodwin's teachings "to enable the user to generate query statements..." The office action fails to show that this feature is missing from Morgenstern.

The office action also proposes that it would have been obvious to a person of ordinary skill in the art to combine Morgenstern and Goodwin "to enable the user to submit the request and receive the complex results at run time and tailored by a developer." This is a nearly direct quote from Goodwin at col. 7, lines 45-50. It is wholly inadequate to merely extract a stated benefit of Goodwin and, for this simple reason alone, conclude that it would have been obvious to incorporate this feature into Morgenstern. Using this sophistry, one could quote a stated benefit from any reference and conclude that it would be obvious to incorporate that reference's teachings into any other reference.

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[6] MPEP 2142.

The law requires clear and particular evidence of a suggestion, teaching, or motivation to combine references or modify reference teachings.[7] Broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence."[8] In addition to demonstrating the propriety of an obviousness analysis, the Federal Circuit recognizes the value of particular factual findings regarding the suggestion, teaching, or motivation to combine because this serves a number of important purposes, including: (1) clear explication of the position adopted by the examiner and the Board; (2) identification of the factual disputes, if any, between the applicant and the Board, and (3) facilitation of review on appeal.[9]

Rather than a legally permissible suggestion/motivation to combine references, modification of Morgenstern to provide the features of the present invention is simply a result of hindsight reconstruction. However, it is improper to attempt to establish obviousness by using the applicant's specification as a guide to combining different prior art references to achieve the results of the claimed invention.[10] The teaching or suggestion to make the claimed combination must be found in the prior art, and not based on applicant's disclosure.[11] The critical inquiry is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination.[12] Obviousness is tested by "what the combined teachings of the

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7 *See, e.g., C.R. Bard, Inc. v. M3 Sys., Inc.*, 48 USPQ2d 1225, 11232 (Fed. Cir. 1998).

8 *McElmurry v. Arkansas Power & Light Co.*, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993); *In re Sichert*, 196 USPQ 209, 217 (CCPA 1977).

9 *In re Dembiczak*, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

10 *Orthopedic Equipment Co., Inc. v. United States*, 702 F.2d 1005, 1012, 217 USPQ 193, 199 (Fed. Cir. 1983).

11 *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

12 *In re Fritch*, 23 USPQ 2d 1780, 1784 (Fed. Cir. 1992) ("It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious."); *Fromson v. Advance Offset Plate, Inc.*, 755 F.2d 1549, 1556,

references would have suggested to those of ordinary skill in the art."[13] But it "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination."[14] And "teachings of references can be combined only if there is some suggestion of incentive to do so."[15]

"To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher."[16] It is essential that "the decisionmaker forget what he or she has been taught at trial about the claimed invention and cast the mind back to the time the invention was made... to occupy the mind of one skilled in the art who is presented only with the references, and who is normally guided by the then-accepted wisdom in the art."[17]

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225 USPQ 26, 31 (Fed. Cir. 1985) (nothing of record plainly indicated that it would have been obvious to combine previously separate lithography steps into one process). See e.g., *In re Gordon et al.*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984) (mere fact that prior art could be modified by turning apparatus upside down does not make modification obvious unless prior art suggests desirability of modification); *Ex Parte Kaiser*, 194 USPQ 47, 48 (Pat. Bd. of App. 1975) (Examiner's failure to indicate anywhere in the record his reason for finding alteration of reference to be obvious militates against rejection).

[13] *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981).

[14] *ACS Hosp. Sys. Inc. v. Montefiore Hosp.*, 32 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

[15] *Id.*

[16] *W. L. Gore & Assoc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

[17] *Id.*

The policy of the Patent and Trademark Office[18] is to follow in each and every case the standard of patentability enunciated by the Supreme Court in *Graham v. John Deere Co.*[19] As stated by the Supreme Court:

> Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or non-obviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.[20]

Thus, hindsight reconstruction, using the applicant's specification itself as a guide, is improper because it fails to consider the subject matter of the invention "as a whole" and fails to consider the invention as of the date at which the invention was made.

In view of the foregoing, the *prima facie* case of obviousness is lacking since there has been no showing of the legally required suggestion or motivation to modify the reference or to combine reference teachings.

Reasonable Expectation of Success

Finally, the *prima facie* obviousness case is also incomplete the office action failed to show that there would be a reasonable expectation of success in

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18 MPEP 2141.

19 148 USPQ 459 (1966).

20 148 USPQ at 467.

modifying/combining references.[21] The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness.[22] If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.[23] Critically, to establish a *prima facie* case of obviousness, there must be a reasonable expectation of success.[24] This reasonable expectation of success must be found in the prior art, not in Applicant's disclosure.[25]

The office action lacks any evidence, allegation, or other mention of the legally required "reasonable expectation of success." Since this mandatory topic is wholly unaddressed by the office action, no *prima facie* case of obviousness has been properly established.

Accordingly, since an ordinarily skilled artisan would not realize reasonable prospects of success in combining Morgenstern and Goodwin, a *prima facie* case of obviousness is lacking.

Conclusion

As shown above, then, the claims are patentable since a *prima facie* case of obviousness does not exist. Namely, (1) the applied art fails to teach the features of the claims, (2) there is insufficient motivation to combine/modify references as proposed by the office action, and (3) there is no showing that an ordinarily skilled artisan would have

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21 MPEP 2142, 2143.02.

22 *Id.*

23 *Id.*

24 *Id.*

25 *Id.*

a reasonable expectation of success in making the office action's proposed modification of references.

35 USC 103 REJECTIONS: CLAIMS 3-4, 12, 23

Claims 3-4, 12, and 23 were rejected under 35 USC 103 as being unpatentable over the combination of Morgenstern/Goodwin in view of U.S. Patent No. 5,404,295 to Katz. Even without considering the individual merits of these claims, they are considered to be patentably distinguished over the proposed combination because they depend from independent claims that are allowable over Morgenstern/Goodwin (as discussed above), and Katz still fails to provide the missing features. For instance, Katz still does not show the claimed combination including providing the appearance templates as claimed, providing subquery generators as claimed, providing control schemas as claimed, providing query form schemas as claimed, etc. Rather, the office action introduced Katz simply to show constructing query form annotations, each annotation comprising an instance of one of the query form schemas. [Office Action: page 5] Accordingly, claims 3-4, 12, and 23 are patentable over the applied art.

CONCLUSION

In view of the foregoing, all pending claims in the application are considered to be patentable over the applied art. Favorable reconsideration and allowance of the application are hereby requested.

Respectfully Submitted,

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OFFICIAL

Version with markings to show changes made

In The Specification

Change the paragraph at page 2, lines 17-22 as follows: (Marked copy)

Web-page designers traditionally allow for users' data queries by preparing a query form suitable to the nature of the expected queries. Such query forms are typically prepared by generating a number of hypertext markup language (HTML) elements that appear in the overall web page design. Cooperatively, these HTML elements represent the query form. One such example is the patent search facility of the United States Patent & Trademark Office web site. ~~One such example is the United States Patent & Trademark Office web site, which provides a patent search facility at http://164.195.100.11/netahtml/search-bool.html.~~